

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
26 June 2003 (26.06.2003)

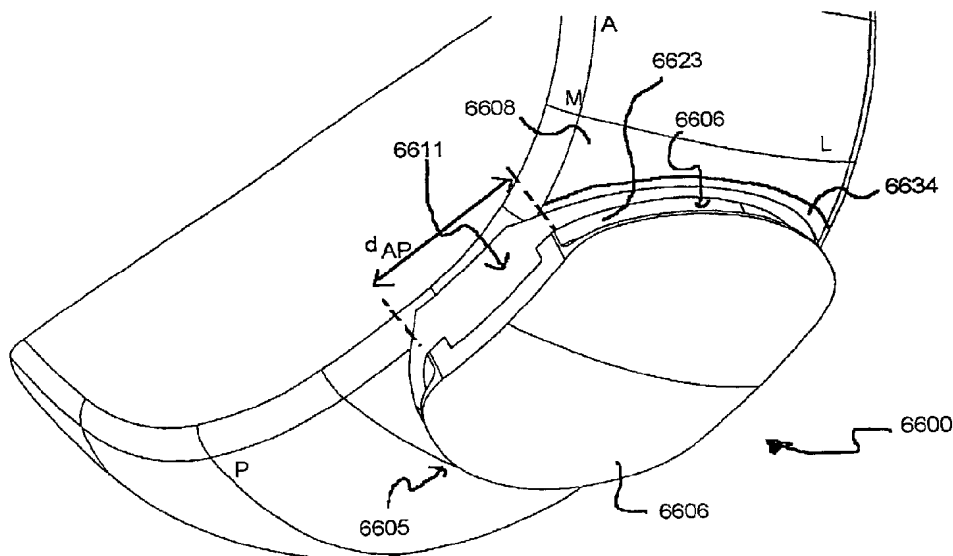
PCT

(10) International Publication Number  
**WO 2003/051210 A3**

- (51) International Patent Classification<sup>7</sup>: **A61B 17/58**, A61F 2/38
- (21) International Application Number: PCT/US2002/040310
- (22) International Filing Date: 17 December 2002 (17.12.2002)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:  
10/024,077 17 December 2001 (17.12.2001) US  
10/162,533 4 June 2002 (04.06.2002) US
- (71) Applicant: **ARTHROSURFACE, INCORPORATED**  
[US/US]; 1063 Tumpike Street, Stoughton, MA 02072 (US).
- (72) Inventors: **EK, Steven, W.**; 49 Powder Hill Road, Bolton, MA 01740 (US). **TALLARIDA, Steven, J.**; 11 Victoria Lane, Mansfield, MA 02048 (US).
- (74) Agents: **PFLEGER, Edmund, P.** et al.; Grossman Tucker Perreault & Pfleger, PLLC, 55 South Commercial Street, Manchester, NH 03101 (US).
- (81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- Published:**  
— with international search report

[Continued on next page]

(54) Title: SYSTEM AND METHOD FOR JOINT RESURFACE REPAIR



(57) Abstract: An implant (40) for installation into a portion of an articular surface (50) includes a protrusion (45) configured to cover and un-excised portion of articular surface proximate to the implant (40). Another implant may form a cavity to allow the un-excised portion of articular surface to remodel over a perimeter edge of the implant. The implant (40) may also includes indentations (6805) such as grooves (6807) to promote articular cartilage remodeling over a portion of the load bearing surface of the implant (40). An elongated or non-round implant (6600) is also provided having two opposing concentric arcuate shaped sides (6611, 6612), as well as a method to seat such an implant in an articular surface. A method for seating an implant without cutting articular cartilage is also provided.



**(88) Date of publication of the international search report:**

25 March 2004

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/US02/40310

## A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : A61B 17/58; A61F 2/38

US CL : 606/96,99,102,104; 623/20.14

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 606/96,99,102,104, 69; 623/20.14, 20.19, 20.21, 20.32, 20.35, 20.38

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6,081,741 A (Hollis) 27 June 2000, see entire document.	1-3,13
X	US 4,158,894 A (Worrell) 26 June 1979, see entire document.	4-7,14-21
X	US 5,580,353 A (Mendes et al) 03 December 1996, see entire document.	14,15
X	US 4,531,517 A (Forte et al.) 30 July 1985, see entire document.	8,10
X	US 5,702,401 A (Shaffer) 30 December 1997, see entire document.	11
A	US 6,206,885 B1 (Ghahremani et al.) 27 March 2001, see entire document.	1-21



Further documents are listed in the continuation of Box C.



See patent family annex.

* Special categories of cited documents:	"I" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"A" document defining the general state of the art which is not considered to be of particular relevance	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"E" earlier document published on or after the international filing date	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"&" document member of the same patent family
"O" document referring to an oral disclosure, use, exhibition or other means	
"P" document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search

27 MARCH 2003

Date of mailing of the international search report

23 MAY 2003

Name and mailing address of the ISA/US  
Commissioner of Patents and Trademarks  
Box PCT  
Washington, D.C. 20231

Facsimile No. (703) 305-3230

Authorized officer

PEDRO PHILOGENE

Telephone No. (703) 308-2252

# INTERNATIONAL SEARCH REPORT

International application No.

PCT/US02/40310

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A, P	US 6,478,801 B1 (Ralph et al.) 12 November 2002, see entire document.	1-21